by Bob Saydlowski, Jr.

Electronic Kits: Part 4

Simmons SDS9

Simmons has topped itself again with the introduction of the *SDS9* kit. The *SDS5*, which I reviewed four years ago, had the facilities to store four different-sounding kits. The new *SDS9* is capable of storing *40* drumkits in memory—and at a lower price!

The Simmons people have done some detailed R&D for the *SDS9*. The pads themselves have black air-floating surfaces for a much more comfortable feel. They also have formed rims, which are playable as well. Due to their new construction, the *SDS9* pads have a lower-pitched acoustic sound than the older models. Each pad still contains a piezo transducer, but in the case of the snare pad, there are two—one for the surface and one for the rim. This special pad, when mated with the *SDS9* brain and a stereo cable, can give regular snare batter sounds, plus rimshots and cross-stick sounds when you play on the rim. (The snare pad has a grey "O" in the Simmons logo to distinguish between it and the regular one-pickup drum pads in the kit.)

The method of pad mounting has changed, too. Each pad still has interior open jaws to accept 7/8" tubing, but now relies on recessed drum-key operated screws on the pad playing surface to secure the pad to the holder arm. The bass drum pad still uses the large, tubular spiked legs, which are set into their pad shell receivers with T-handle bolts. The locking method must have changed some, however, as the legs seem a lot sturdier and more twist-free than before. A large, rubber-covered piece of steel is attached to the bottom of the pad

for pedal mounting.

The *SDS9* drum voices are a mixture: The toms are analog synthesized, the bass drum is software-generated, and the snare/rim voices are real digital sounds (snare hit, rimshot, and cross-stick) blown into EPROMs. EPROMs are delicate silicon chips, and the name stands for "erasable programmable read-only memory." The chip's memory consists of numbers that represent a musical tone or waveform. EPROMs are available in various memory sizes (2K, 4K, 8K, 16K, 32K). The larger the EPROM, the more numbers it can store, and thus the longer sound it can produce. Data on a programmed EPROM can be erased by exposing the chip to ultraviolet light. It's then possible to reprogram it. An EPROM is a very fragile creature, and one must use care not to bend or break off its tiny mounting legs. When this happens, the EPROM is no good.

A cover plate in the brain's cabinet face protects the mounted EPROMs. These three EPROMs can be removed and replaced by others, but since they are not mounted in ZIF (Zero Insertion Force) sockets, the utmost care must be used not to bend the legs. Simmons' Library Of Sounds has a large range of programmed EPROMs, or you can burn your own sounds into EPROMs with the help of the Simmons *EPB Sampler.*

As I said earlier, the *SDS9* has 40 selectable drumkits, 20 of which are factory presets, while the other 20 are user-programmable. The various kits are grouped off in banks (A-B-C-D) with five kits in each bank. Pressing both selector buttons for bank and kit at the same time gets you into user-tailored kits (which, for ease of explanation, I'll call AA-DD). The preset kits cannot be programmed over. If you try, the unit will read out "NO" in its LED window. The separate drumkits within a given bank may also be selected via a footswitch, rather than the panel button, but the banks themselves (A-D or AA-DD) *cannot* be selected with this footswitch. For this, you must press the Bank Select button directly at the brain. However, the footswitch can be programmed to sequence particular kits.

When programming your own kit sounds, a row of program-variable controls allows you to set the parameters for a particular voice. (These controls do not affect the presets.)

There are six channels on the *SDS9* brain, corresponding to the drum voices. Simmons analyzed the sound of a bass

drum with a computer, and broke it down into two parts: click and thump. Bass drum variables control click pitch, thump, click length, thump length, and click/thump balance. The control dials allow different ranges to be set for each component.

The snare drum channel variables are filter pitch, filter sweep, snare PROM pitch, noise level, pitch bend, decay, snare/rim balance, and filter resonance. The rim controls are for PROM pitch, PROM select (cross-stick or snares-off rimshot), pitch bend, decay, and noise level. With independence between snare and rim sounds, it's possible to have a wide range of combinations between the two. By the way, since the pad rim is playable, hitting both the pad surface and rim will give both snare and rim sounds simultaneously.

The three toms have adjustable parameters controlling filter pitch, filter sweep, tone pitch, pitch bend, decay, click level, and noise/tone balance. The *SDS9* offers two nice options for the tom-tom voices. One is a "second skin" switch, which will simulate the resonance and harmonics of a double-headed drum. The other feature is the capability to copy the parameters of one tom-tom to the other two automatically, making only changes in relative pitch. This is very useful when you've programmed in a great sound and want to duplicate the texture on the other two drums; one push of a button does it all. (This is certainly a lot easier than trying to get acoustic toms to match!)

All channels have LEDs to signify programming or pad-trigger. Each channel has its own sensitivity control and its own volume control. There is also a Mix control for adjustment of all channel volumes simultaneously.

We've only covered half of the *SDS9*'s buttons so far. There is another row (push buttons this time) on the left of the brain's face. The *SDS9* will access three different modes, all with their own functions, depending on which buttons you push.

The Play mode allows playing of the pads, of course. Pressing the Button Tap button while in Play mode allows you to sample each voice in a chosen kit without manually striking the pads. Now the six remaining buttons in the row are the six drum voices: rim, hi tom, med tom, low tom, snare, and bass. Press the corresponding button, and you'll hear that voice as it appears in the kit you've selected. The Auto-Trigger button will start a cycle that

triggers each drum voice in succession. Speed and volume dynamics can be adjusted. The *SDS9* will also auto-trigger in four variations during programming: each voice in turn, one single voice at a constant dynamic, one single voice with a rising dynamic, or snare/rim combination plus cycling around the three toms. As a final feat, the *SDS9* can auto-demo itself when you press the correct buttons. Also, while in Play mode, you may verify memory, load memory from tape, or dump memory to tape.

The *SDS9's* Program mode switches the button functions so you may select the voice you want to program, save the voice, or store the entire kit you've just programmed into the memory bank. The buttons for "second skin" option and for copying tom voices are also in this group. The *SDS9* has another feature, which is a first for any electronic kit: built-in, programmable echoes for any channel—either slapback or long repeat. Echo speed/delay and echo length can be adjusted. I like this feature very much, since it enables "studio effect" sounds to be created without the added cost of an outboard digital delay.

The third mode is for MIDI, and all the push buttons now become MIDI controllers. The MIDI interface allows connection with external synths, sequencers, drum machines, etc., for triggering either to or from the *SDS9*. (The *SDS9* manual goes into detailed explanation of the MIDI process; to explain it here would take a separate article!)

The *SDS9* brain has separate 1/4" pad inputs and outputs, as well as a 1/4" mix output, and a 1/4" stereo output (the drums are pre-panned). There are also 8-pin jacks for MIDI in and out, tape dump/load, and *SDS6* sequencer input. Simmons has finally incorporated a most-needed feature on the *SDS9*—a headphone jack—something all its past units never had! The brain itself is free-standing, but it can be rack-mounted, if desired. (Simmons has ears available for this.) All cables are included for hookup, but hardware is not. The pads are available in five colors: red, white, blue, yellow, and black. Simmons does have double/triple floor stands available in black finish at $95 each. Simmons also has the *Ultimate Drum Rack,* which holds all pads on a surrounding metal frame ($230 without mounting arms). Extensions are available to go beyond the area of a normal five-piece setup. Lastly, software is available to link the *SDS9* with a Commodore *64* computer.

The *SDS9* is meant to reproduce drum sounds, not wild sound effects (which is a good thing, since I, for one, am tired of trains, laser guns, and the like). I cannot find anything to criticize about the *SDS9* sounds; they're all just fabulous. From rock to reggae to heavy metal, the appropriate sounds are all there, crisp and clean. The brain is logically laid out, and pro-

gramming of voices is accomplished quite easily. (I do have some doubts, however, regarding the durability of the snare pad's rim over long-term usage, but I guess time will tell.)

The *SDS9* is remarkable in its functions and its sounds, but perhaps its most remarkable feature is its price. At $1,995—almost half the price of the original *SDS5*—you can be the owner of 40 different drumkits, plus all the various options and features I've talked about in this review.
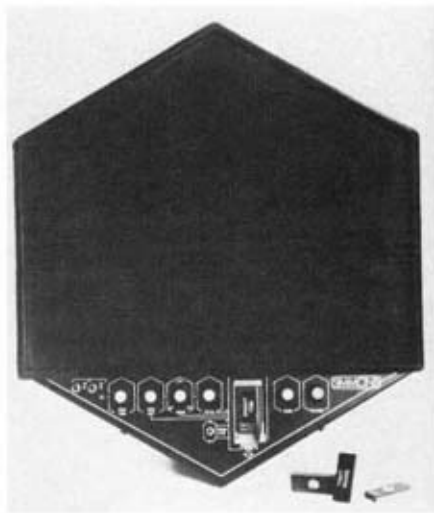
Simmons SDSI

The *SDSI* is Simmons' answer to those who only want one or two electronic pads added into their setups. The *SDSI* is self-contained and is battery-powered (or powered by an AC adaptor). It has the usual black-surfaced, hexagonal shape (though not the new pad construction like the *SDS9),* and has all sound modifier controls at the bottom section of the pad.

The *SDSI* sound is contained in an interchangeable digital EPROM, which, along with the control knobs, is protected by a removable cover. The EPROM is mounted in a ZIF socket for easy removal/replacement. The *SDSI* is capable of only one sound at a time, that being the one programmed into the PROM you've chosen. As with the *SDS9,* you can draw from Simmons' Library Of Sounds, or create your own personal chips by using the *EPB.* Since certain sounds require larger memory, the *SDSI* has a selector switch for 64- and 128-size chips. This switch also gives a longer or shorter sound length. For example, when using the "Bass Riff" EPROM, only half of the pattern is heard when set at 64. Switching to 128 gives the complete riff pattern. In the case of a snare EPROM, the 128 setting repeats the sound once, while 64 gives the snare sound one time only.

Variable control knobs are for volume, pitch, pitch bend up/down, and sensitivity. Two other knobs control Simmons' unique Run Generator. When using the Run Generator, each consecutive strike

yields a lower pitch. By using the Run Time and Run Amount controls, you can set the speed of descending pitch, as well as the interval between the highest and lowest note of the run. This is especially good for imitating multi-tom fills from the single *SDSI* pad. The *SDSI* can also be externally triggered by microphones, click tracks, sequencers, etc.

The batteries that power the unit are located inside of the pad shell and are turned "on" when the cable end is inserted into the 1/4" jack. Simmons claims 30 hours of battery life under normal usage, but remember, you can use an AC adaptor instead. Three shell colors are available: black, red, or white. The *SDSI* also comes with a ratchet-mount arm and adaptor clamp to mount the pad on an existing cymbal or drum stand.

The Simmons sound library currently has 65 different PROMs, so you'll probably be able to find the sound you want for your *SDSI*. If not, blank EPROMs are available in packs of six, so you can sample your own sounds. (The *EPROM Blower* retails at $795.) I heartily recommend having the "Bass Riff" chip in your collection of sounds. I found it to be great for soloing—just like having a bass player with you, accenting and playing against your solo— and a lot of fun! But Simmons has tons of drum and percussion sounds as well. A cassette is available that demonstrates every sound in this library.

If you're not ready to purchase a complete Simmons kit, the *SDSI* is a great unit for adding another sound into your setup. Of course, there's nothing wrong with using a multiple *SDSI* setup, either! Retail: $365.00.

drums

From Sweden comes the latest in digital electronic drumkits. ddrums utilize digitally sampled sounds on interchangeable sound cartridges. Unlike EPROMs, these cartridges have their mounting legs encased, making removal and replacement much safer. Over 100 different sound cartridges are currently available. However, unlike Simmons, the ddrum cartridges do not allow user-sampling. There will be more on these sound cartridges later.

The basic five-piece ddrum kit contains three 10" round tom-tom pads, one 12" round snare pad, a very unique bass drum, and a modular brain. The tom and snare

pads all have real drumheads (Remo coated *Ambassadors),* real metal hoops, and are fully tensionable with a drum key. The drumheads are mounted atop foam discs inside the shells. The tom-tom pads have receiver brackets to allow mounting on any standard L-arm holder; the snare pad will mount onto a regular snare stand.

As with the *SDS9,* the ddrum kit has a special snare pad. It uses two modules—one for snare batter, one for rim. The snare rim itself is sonically independent of the snare head, allowing for individual sounds. Two XLR sockets are located underneath the pad shell. (The other pads have one XLR jack each.)

Most other electronic kits have a large bass drum pad, which takes up a sizable amount of space and only serves a cosmetic purpose. ddrum realized this and constructed a radically new pad design for the bass drum. The bass drum is freestanding, and utilizes a steel base plate and steel post, welded together at a 45° angle. Adjustable screw-type anchoring spurs are fitted onto the base to prevent sliding. The striking post has a replaceable cushion-mounted rubber head. Amazingly enough, looks *can* be deceiving, as the ddrum bass drum has a *great* feel to it, with a little bit of "give" (due to the cushioning of beater impact), and it responds like a regular bass drum batter head. This is one innovation that works as well as, if not better than, the instrument it's modeled after.

The ddrum brain is rack-mounted in a flight case. The basic rack contains six pad voice modules and one power module. It is expandable to eight modules, or to seven modules plus a powered mixer module. Each voice module is identical, having controls for pitch, pitch dynamics sensitivity, decay, treble (high-end boost/cut), and bass (low-end boost/cut). Each module has a screw-based trim pot for adjustment of pad sensitivity, as well as a trigger LED. There are two push buttons on each module that allow selection of up to four sounds from a single cartridge (if that cartridge is multi-sound). There are no volume controls, since each module must be separately outputted to an outboard mixing console (unless, of course, you get the optional mixer module, which has a single mix output).

The pitch sensitivity control duplicates what happens when a conventional drum is struck soft or hard: The drum pitch is altered, depending on attack. The amount of pitch alteration can be varied, or can be exaggerated by turning the control all the way up. A single pad can sound almost a one-octave range, depending on the pressure applied when the pad is struck. Increased stick pressure yields higher pitches. Actually, if desired, a multi-tom fill can be simulated on one ddrum pad by varying the degree of stick attack!

The rear of each module has a 1/4" trigger input for use with the drum pads (or other sources), 1/4" and XLR audio output jacks, and a cartridge port to accept the sound cartridge. The cartridges themselves measure approximately 2 3/4"x1 1/2", and are keyed for correct insertion into the module port. There are two grades of cartridges—"B" and "C" (16K and 32K)—and a single cartridge can contain anywhere from one to four digital sounds. Some sounds are pure, and some have studio effects added on. I've been informed that all the ddrum sounds were recorded digitally on tape in a recording studio by well-known Swedish drummers with their own drumkits. The tapes are taken back to the ddrum lab, analyzed on computers, scopes, etc., and then each sound is compressed differently. Some examples of the resulting separate cartridges are: 10", 12", 14"Sonor toms, 8", 10", 12", 14" Yamaha toms, echo snare, kick, handclap, timpani, echo kick, etc.

Any sound cartridge may be plugged into any module; one does not need to follow a specific channel arrangement. Whatever cartridge you insert is the sound you'll get from the corresponding pad. Certain parameters are adjusted by the module controls, allowing you to tailor the sounds to suit your needs. Also, a cartridge with four sounds in it allows instant call-up of any one of them, giving you immediate access to four different sound variations. Each sound cartridge retails for $110 to $175—not cheap by any means. The basic five-piece ddrum kit comes with six pad-to-module cables, but does not include cables to go from module output to mixer. Pad shells are available in black or white.

I did not get to hear every cartridge available, but from the ones I did test, the sounds were realistic and exact. One thing I've noticed about digital drum sounds is that you are hearing a studio-recorded sound, as on a record album. The "uninitiated," shall we say, sometimes have trouble dealing with the fact that the drum sounds are coming from something other than the living, breathing, vibrating, acoustic, live drum that they are accustomed to. This can cause doubt in their minds as to whether or not the sounds truly *are* realistic. (The same reaction was probably felt towards the first Fender bass!)

At any rate, all the sounds were perfect, clear reproductions of their original sound source models. I was very impressed with all the sounds I heard, and I'll dare to say that the ddrum kit has the most authentic sound of all the digital drum makers, be they drum computers or drumkits. There is nothing "electronic-sounding" about the ddrums; they are pure, natural, studio drum sounds, and I can imagine that they might be difficult to tell apart from real drums in a studio environment. For live use, high-quality amplification is needed in order to produce the best possible sound. I'm so enchanted with these sounds that I hope ddrum sees fit to develop a single pad

a la Simmons *SDS1!*

The ddrums have been sold in Europe since 1983, and are just now breaking into the U.S. market through distribution by Guild Musical Instruments. The construction is solid, and the genuine feel is there, thanks to the real heads and hoops. The digital sounds are precise, and, as I said, incredibly real. The only drawback may be the price—$4,500 without stands—but I suppose it's a matter of "getting what you pay for," from a price/quality standpoint. Studios, pro players, and others willing to spend the extra money will get a fully digital drumkit with quite unbelievable sound and response.